MFM Neo Clinical Trials Workshop Information
August 2015

At the NICHD Young Investigators Meeting, there is a Clinical trials workshop. In this activity, we will be discussing and designing a clinical trial. Prior to the workshop there will be a presentation on the topic to set the stage. In addition, the questions below will help you to prepare for the workshop – you will be expected to have reviewed this material and the suggested reading to actively participate in the workshop.

Questions to help you prepare for the Clinical Trial design Workshop:
Use of Antenatal Steroids to Improve Outcomes in the Late Preterm gestation

1. What is the quality of evidence for each of the following*
   - Antenatal corticosteroids (ACS) administered at 24-34 weeks gestation reduce the neonatal complications in infants born
   - ACS administered at 34-37 weeks gestation reduce the neonatal complications in infants born
   - Is there clinical equipoise?

2. Before doing a RCT on the use of ACS in the late preterm period, is there a need for (a) descriptive epidemiology (b) observational study to determine if there are associated morbidities and assess the effectiveness and safety of treatment? Are these studies possible?

3. In an investigative design, what treatment regimens should/can be compared?

4. Masking: Should/can the treatment groups be masked or "blinded"? How could this be accomplished?

5. Primary outcome:

a) Should this be efficacy or safety of the treatment? Which outcome (s) should be included as clinically significant measures? How do you specify the outcome measure(s)?
b) Which perinatal outcome(s) are of secondary importance, but worthwhile collecting data on?
c) Are there any long-term effects that should be measured in the infants/mothers exposed in this protocol?

6. "Study condition": This is the population with the "condition of interest". What would be the ideal study condition to test?

7. Study population: a) What group of patients would you screen to obtain the study population? b) What would your inclusion and exclusion criteria be?

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*Quality of Evidence:

I. One RCT
II. Controlled Trials / No randomization
    -cohort (case control studies)
    -multiple time series / dramatic effect
III. Opinion of experts / descriptive studies, expert committees

8. What proportion of women with the condition would be ineligible by the criteria?

9. Are there any subgroups that should be focused on for analysis (age, race, ethnicity, parity, multiple gestation, etc)? What is the effect of subgroup analysis on study design?

10. To what extent would you "standardize" the clinical managements of the randomized patients?

11. If a well-designed RCT showed no difference between groups, how would you explain these results?

12. **Sample Size** (will be discussed at the meeting)
    a) Prevalence of primary outcome: How would you go about estimating the frequency of the primary outcome in this population?
    b) Effect size: How much more effective should treatment be than non-treatment in terms the primary outcome?

13. **Feasibility** (will be discussed at the meeting)
    a) Study sample: What proportion of the eligible pool would reasonably consent to be randomized in a RCT?
    b) How many pregnancies would be required to recruit the required sample?

14. Compliance with protocol and Protocol violations: how important is compliance with the protocol? What effect does protocol violations, withdrawals or loss to follow up have on the interpretation of the results? Would you exclude patients with protocol violations or who withdraw?

Suggested Reading

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